

ABSTRACT OF THE DISCLOSURE

A buffer mechanism for buffering microinstructions between a trace cache and an allocator performs a compacting operation by overwriting entries within a queue, known not to store valid instructions or data, with valid instructions or data. Following a write operation to a queue included within the buffer mechanism, pointer logic determines whether the entries to which instructions or data have been written include the valid data or instructions. If an entry is shown to be invalid, the write pointer is not advanced past the relevant entry. In this way, an immediately following write operation will overwrite the invalid data or instruction with data or instruction. The overwriting instruction or data will again be subject to scrutiny (e.g., a qualitative determination) to determine whether it is valid or invalid, and will only be retained within the queue if valid.